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09/656,140	09/06/2000	Daisuke Shinohara	500.38991X00	9175

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EXAMINER

MAURO JR, THOMAS J

ART UNIT	PAPER NUMBER
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2143

DATE MAILED: 06/10/2004

9

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.

09/656,140

Applicant(s)

SHINOHARA ET AL.

Examiner

Thomas J. Mauro Jr.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 March 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 4-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 4-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 8.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

1. This action is responsive to the amendment (Paper # 7) filed on March 26, 2004. Claims 1-2 and 4-10 remain pending. Claim 3 has been cancelled. Claims 11-17 have been newly added.
2. Claims 1-2 and 4-17 are presented for further examination.
3. Objections to both the specification and claim 8 have been withdrawn.

Claim Objections

4. Claims 12-13 objected to because of the following informalities: these are apparatus claims and they refer to the method according to claim 11, however, claim 11 is an apparatus claim. Appropriate correction is required.
5. Claims 15-17 objected to because of the following informalities: these are system claims and they refer to the method according to claim 11, however, claim 11 is a system claim. Appropriate correction is required.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-2, 4-5 and 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Crisan (U.S. 6,292,890) in view of Craig et al. (U.S. 6,266,809).

Regarding claim 1, Crisan teaches a firmware updating method, for use in an information processing apparatus having a storage storing a firmware and a communications device for communicating via a network with a remote management server, for updating the firmware for said information processing apparatus, comprising the steps of:

setting said communications device as a boot device according to an instruction from said remote management server [Crisan -- Col. 6 lines 10-13, lines 25-31 and lines 65-67 and Col. 7 lines 1-4 – Network server sends “wake-up” packet to network computer which alters the boot order to boot from the network and obtain master copy of operating system for maintenance. CPU alters boot sequence to boot from network, i.e. communication device];

resetting said information processing apparatus in system reset according to a system reset instruction from said remote management server under an environment of an operating system of said information processing system operating [Crisan -- Col. 6 lines 39-52 and lines 65-67 – Network server sends “wake-up” packet which causes system to reboot, i.e. reset];

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booting said information processing apparatus by said communications device [**Crisan -- Col. 6 lines 25-35 – Maintenance program is loaded onto network computer by network server on boot**]; and

setting said storage as a boot device [**Crisan -- Col. 5 lines 48-54 and Col. 7 lines 4-7 – After any updating or maintenance activities are completed, original boot order is followed which causes computer to boot from local storage device, i.e. hard disk**].

Crisan fails to explicitly teach updating firmware, setting said storage as a boot device and controlling “off” and “on” of a power supply in response to requests from said server and reading and executing said firmware updated in said storage of said information processing apparatus.

Craig, however, discloses a firmware updating method [**Craig -- Col. 3 lines 26-28**], which employs a server to update the firmware of a network computer [**Craig -- Col. 6 lines 4-11 and Col. 7 lines 20-22 and lines 43-44 – Server is responsible for controlling the updating of the firmware**], to issue a cold reboot, i.e. controlling “off” and “on” of a power supply [**Craig -- Col. 6 lines 11-12 and Col. 7 lines 22-24 – Cold reboot controls power supply by first turning it “off” and then back “on” to reboot**] and to read and execute the updated firmware in said storage [**Craig -- Col. 5 lines 34-37 and Col. 7 lines 58-66 – After downloading updated firmware to the network computer, network computer is rebooted and newly updated firmware stored in local storage area, i.e. memory, is executed**].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the updating of firmware of firmware by a server, issuing of a cold reboot command and reading and executing of updated firmware in local storage as taught by Craig into the maintenance software of Crisan in order to achieve the benefit of performing a routine type

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of maintenance activity, i.e. updating firmware, remotely on network computers which reduces the management requirements on the network and alleviates unnecessary labor of having to travel to a site to update a computer.

Regarding claim 2, Crisan-Craig teach the invention substantially as claimed, as aforementioned in claim 1 above, including wherein a maintenance program is acquired from said remote management subsystem in said execution starting step and is a program for updating firmware possessed by said information processing apparatus [**Craig -- Col. 6 lines 7-8 – Image, i.e. program, loaded from network server is for updating firmware**].

Regarding claim 4, Crisan-Craig teach the invention substantially as claimed, as aforementioned in claim 2 above, including:

acquiring information about the firmware from said information processing apparatus, which has the information about the firmware, by said remote server [**Craig -- Col. 7 lines 2-6 – Server obtains firmware date and/or revision code from network computer**]; and

judging a program to be sent to said information processing apparatus according to the information about the firmware [**Craig -- Col. 7 lines 2-6 - Server determines if network computer needs firmware update and after acquiring firmware information, it is required that the server decide which firmware program is to be sent to the computer for properly updating the firmware. Therefore, it is obvious this step is performed to insure proper program is downloaded so as not to conflict with the hardware of the system**].

Regarding claim 5, Crisan-Craig teach the invention substantially as claimed, as
aforementioned in claim 1 above, including wherein said execution starting step includes a step
to check that an obtained maintenance program is an appropriate program [**Craig -- Col. 7 lines
32-36 – System checks to ensure image, i.e. program, has not been tampered with and is the
proper program for the network computer**]

Regarding claim 9, Crisan-Craig teach the invention substantially as claimed, as
aforementioned in claim 1 above, including wherein the setting of said boot device and said reset
are performed by a management agent which operates on said information processing apparatus
[**Crisan -- Col. 6 lines 47-67 – Management agent, i.e. CPU or power management unit, re-
orders the boot sequence and controls on/off for the network computer**].

Regarding claim 10, Crisan-Craig teach the invention substantially as claimed, as
aforementioned in claim 9 above, including wherein said boot device is set by said management
agent which calls an I/O routine of the firmware in an environment where an operating system of
said information processing apparatus is operating [**Crisan -- Col. lines 65-67 and Col. 7 lines
1-4 – CPU re-orders boot list which implicitly requires that it performs an I/O routine of
the firmware, i.e. BIOS, of the OS to change the boot sequence**].

8. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Crisan (U.S. 6,292,890) and Craig et al. (U.S. 6,266,809), as applied to claim 5 above, in view of Atkinson et al. (U.S. 6,367,012).

Regarding claim 6, Crisan-Craig teach the invention substantially as claimed, as aforementioned in claim 5 above, including disclosing that validation of the image, i.e. software, is performed using methods common for validating operating systems and that encryption may be utilized to increase security of the image when transferred [**Craig -- Col. 7 lines 36-42**].

Crisan-Craig fail to teach obtaining and inspecting a certification file for a program.

Atkinson, however, teaches obtaining and inspecting a certification file corresponding to a program [**Atkinson -- Col. 3 lines 12-24 and Col. 6 lines 19-38**].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the use of a certificate to validate and verify the validity of a downloaded program as taught by Atkinson, into the invention of Crisan-Craig, in order to achieve the aforementioned benefit of ensuring the program is from a valid source and is uncorrupted.

9. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Crisan (U.S. 6,292,890) and Craig et al. (U.S. 6,266,809), as applied to claim 1 above, in view of Okada (U.S. 6,088,738).

Regarding claim 7, Crisan-Craig teach the invention substantially as claimed, as aforementioned in claim 1 above, but fail to explicitly teach acquiring identification information used to obtain a program, sending a request to obtain a pseudo program by said information and checking the presence or not of a reply to the request.

Okada, however, teaches acquiring and sending a request to obtain a pseudo program by said identification information [**Okada -- Col. 4 lines 47-49 and Col. 10 lines 38-47 – Request is sent using identification information, i.e. pseudo program name**]; and checking the presence or not of a reply to the request to obtain the pseudo program [**Okada – Col. 10 lines 66-67 – Col. 11 lines 1-4 and lines 29-36 – Host waits for transmission of response, i.e. reply. This can come in the form of an error or a program name in return**].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include sending pseudo program name requests out on the network by a network computer as taught by Okada into the invention of Crisan-Craig in order to ensure that no other computers are acting as servers and transmitting unauthorized programs to machines which further enhances the security of the system.

10. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Crisan (U.S. 6,292,890) and Craig et al. (U.S. 6,266,809), as applied to claim 1 above, in view of Moritomo (U.S. 5,724,511).

Regarding claim 8, Crisan-Craig teach the invention substantially as claimed, as aforementioned in claim 1 above, but fail to explicitly teach previously registering identification

information of a computer subjected to maintenance into a server, receiving the input of identification information prior to setting boot device and judging whether the received identification information is included in the registered identification information.

Moritomo, however, teaches a remote maintenance control system which previously has registered devices for control by maintenance control system and upon request specifying device, checks to ensure the device is registered with the maintenance facility [**Moritomo -- Figures 5 and 7, Col. 4 lines 46-50, Col. 5 lines 11-23, Col. 8 lines 26-49 and Col. 9 lines 7-31**].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the registering and checking of identification information corresponding to network computers by the remote maintenance control system as taught by Moritomo into the invention of Crisan-Craig in order to ensure that only proper computers registered under a given server are maintained by that server.

11. Claims 11-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Crisan (U.S. 6,292,890) in view of Craig et al. (U.S. 6,266,809) and further in view of Ote et al. (U.S. 5,815,652).

Regarding claim 11, Crisan teaches an information processing apparatus comprising:

a communications device which is to be connected with a server [**Crisan -- Figure 2 and Col. 6 lines 8-10**];

a setting component setting one of said communications device and said storage as a boot device in response to a request from said server [**Crisan -- Col. 6 lines 10-13, lines 25-31 and**

lines 65-67 and Col. 7 lines 1-4 – Network server sends “wake-up” packet to network computer which alters the boot order to boot from the network and obtain master copy of operating system for maintenance. CPU alters boot sequence to boot from network, i.e. communication device];

a system reset component for resetting said information processing apparatus in system reset according to a request from aid remote management server under an environment of an operating system of said information processing apparatus [**Crisan -- Col. 6 lines 39-52 and lines 65-67 – Network server sends “wake-up” packet which causes system to reboot, i.e. reset]; and**

information processing apparatus sets said storage as a boot device [**Crisan -- Col. 5 lines 48-54 and Col. 7 lines 4-7 – After any updating or maintenance activities are completed, original boot order is followed which causes computer to boot from local storage device, i.e. hard disk].**

Crisan fails to disclose a storage device for storing firmware, a power controller controlled by a first power supply separate from a second power supply, a power controller controlling “off” and “on” requests, obtaining a program from a server after resetting apparatus to control firmware and storing the updated firmware and controlling “on” the power controller to execute firmware. Craig, however, teaches a storage device for storing therein a firmware [**Craig -- Col. 5 lines 34-37 – Flash ROM stores firmware for network computer], a power controller to control “off” and “on” of an apparatus from server requests [Craig -- Col. 6 lines 11-12 and Col. 7 lines 22-24 – Cold reboot controls power supply by first turning it “off” and then back “on” to reboot], wherein said communications device obtains a program from said server after resetting**

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said information processing apparatus and wherein said information processing apparatus updates said firmware by use of said program [**Craig -- Col. 6 lines 4-11 and Col. 7 lines 20-22 and lines 43-44 – Network computers downloads boot image which contains executable code to obtain updated firmware**] and storing said firmware updated by said information processing apparatus in said storage [**Craig -- Col. 5 lines 34-37 – Flash ROM stores firmware**], and controlling “on” said power controller according to a request from said server to execute said firmware by use of said storage [**Craig -- Col. 5 lines 34-37 and Col. 7 lines 58-66 – After downloading updated firmware to the network computer, network computer is rebooted, thereby controlling “on”, and newly updated firmware stored in local storage area, i.e. memory, is executed**].

In addition, Ote discloses the use of multiple power supplies in an information processing apparatus, a power controller controlled by a first power supply separate from a second supply [**Ote -- Figure 1A and 5A and Col. 6 lines 21-41 and Col. 8 lines 5-18**].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the use of a power controller and separate power supplies, as taught by Ote, along with a storage device for storing firmware, a power controller for controlling “off” and “on” requests, obtaining a program for a server for updating the firmware and controlling “on” the power controller to execute firmware, as taught by Craig, into the invention of Crisan in order to achieve the benefit of performing a routine type of maintenance activity, i.e. updating firmware, remotely on network computers which reduces the management requirements on the network and alleviates unnecessary labor of having to travel to a site to update a computer in addition to

providing a more stable power supply to the computer while at the same time providing greater control for a remote manager.

Regarding claims 12 and 13, these are apparatus claims corresponding to the method claimed in claims 4 and 5. They have similar limitations; therefore, claims 12 and 13 are rejected under the same rationale.

Regarding claim 14, this is a system claim corresponding substantially to the apparatus claimed in claim 11. It has similar limitations; therefore, claim 14 is rejected under the same rationale.

Regarding claims 15 and 16-17, these are system claims corresponding to the method claimed in claims 4 and 7-8. They have similar limitations; therefore, claims 15 and 16-17 are rejected under the same rationale.

Response to Arguments

12. Applicant's arguments with respect to claims 1, 6 and 8 have been considered but are moot in view of the new ground(s) of rejection.

13. Applicant's arguments filed March 26, 2004 have been fully considered but they are not persuasive.

(A) Applicant contends that Crisan-Craig do not disclose a server acquiring information about firmware from a managed computer and judging a program to be sent according to the information received and further, the computer checking the obtained program to ensure it is an appropriate program, whereas, claims 4 and 5 call for these limitations.

In response to argument A, Examiner asserts that Crisan-Craig do in fact teach a server acquiring information about firmware from a managed computer and judging a program to be sent according to the information received and further, the computer checking the obtained program to ensure it is an appropriate program. Information regarding the firmware, i.e. date or revision code, of a computer is acquired by server. See Craig Col. 7 lines 5-9. Once this is obtained, the server is required to make a decision as to which firmware update boot image, i.e. what revision code or date, will be sent to network computer. See Craig Col. 7 lines 19-22. Once this boot image has been downloaded, the network computer validates the downloaded information to assure it is intended for the network computer, meaning that it is the proper program for that computer. See Craig Col. 7 lines 32-36. Therefore, in light of the above remarks and the rejection above, the Examiner accordingly demurs to the assertion that Crisan-Craig do not teach the limitations of claims 4 and 5.

(B) Applicant contends that Okada does not disclose acquiring identification information used to obtain a maintenance program, sending a request to obtain a pseudo maintenance program and checking the presence or not of a reply to the request, whereas claim 7 calls for this limitation.

In response to argument B, Examiner asserts that Okada does in fact teach acquiring identification information used to obtain a maintenance program, sending a request to obtain a pseudo maintenance program and checking the presence or not of a reply to the request. In Okada Col. 10 lines 44-47, a request is received which contains a pseudo program name by a requestor, thereby implying the requestor has already obtained the identification of the program, i.e. the pseudo program name. Once the request has been sent, a response is transmitted to the host, i.e. requestor, which constitutes a reply. See Okada Col. 10 lines 66-67 – Col. 11 lines 1-4 and lines 29-36. During patent examination and prosecution, claims must be given their broadest reasonable interpretation. *In re Van Geuns*, 988 F.2d 1181, 1184, 26 USPQ2d 1057, 1059 (Fed. Cir. 1993); *In re Prater*, 415 F.2d 1393, 1404, 162 USPQ 541, 550 (CCPA 1969). Giving the instant claims their broadest reasonable interpretation, “requesting a pseudo program using identification information and checking for a reply” is broad enough to read on the requests by the host for a pseudo program name and waiting for a reply of Okada. Therefore, Examiner demurs to this assertion based upon the above rationale and rejection above.

Conclusion

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas J. Mauro Jr. whose telephone number is 703-605-1234. The examiner can normally be reached on M-F 8:00a.m. - 4:30p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A. Wiley can be reached on 703-308-5221. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.


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TJM

June 2, 2004



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